

In the claims:

Please cancel claims 1-17 and 20-22.

Please amend claims 18-19 and add claims 27-31 to read as follows:

1. - 17. (Canceled)

18. (currently amended) The integrated circuit of claim [[15]] 27 wherein the carrier substrate further includes at least one heat sink disposed on a top surface of the carrier substrate.

19. (currently amended) The integrated circuit of claim [[15]] 27 wherein each of the plurality of second solder balls further include an outer layer composed of the first material.

20. – 22. (Canceled)

23. (previously presented) A method for making an integrated circuit comprising:
applying a plurality of first solder balls having a first dimension and a first melting temperature to a bottom surface of a carrier substrate using a solder dispensing machine;

applying a plurality of second solder balls having a second dimension and a second melting temperature to the bottom surface of the carrier substrate using a solder dispensing machine;

engaging the bottom surface of the carrier substrate with a top surface of a printed circuit board; and

applying a soldering heat, the soldering heat having a temperature greater than or equal to the first melting temperature and less than the second melting temperature, to the carrier substrate and printed circuit board so that the plurality of first solder balls create a plurality of solder joints between the bottom surface and the top surface and the plurality of second solder balls define a minimum distance between the carrier substrate and the printed circuit board.

24. (Original) The method of claim 23 further comprising:
prior to engaging the bottom surface of the carrier substrate with the top surface of the printed circuit board, attaching an integrated circuit on the bottom surface of the carrier substrate, such that the minimum distance is disposed between the integrated circuit and the printed circuit board.
25. (Original) The method of claim 23 further comprising:
prior to engaging the bottom surface of the carrier substrate with the top surface of the printed circuit board, attaching at least one heat sink to a top surface of the carrier substrate.
26. (Original) The method of claim 23 wherein each of the plurality of second solder balls further include an outer layer composed of a material having the first melting temperature such that when the printed circuit board and the carrier substrate are heated, the plurality of second solder balls create a control solder joint, which includes a melted outer layer and the second solder ball having the second diameter.
27. (New) An integrated circuit comprising:
a carrier substrate having a bottom surface and an application specific integrated circuit disposed on the bottom surface of the carrier substrate and wherein the minimum distance is defined between the application specific integrated circuit and the printed circuit board;
a printed circuit board having a top surface;
a solder ball array coupling the bottom surface of the carrier substrate to the top surface of the printed circuit board, the solder ball array comprising:
a plurality of first solder balls composed of a first material having a first diameter and a first melting temperature; and
a plurality of second solder balls composed of a second material having a second diameter and a second melting temperature; and

such that when a heat, having a temperature greater than or equal to the first melting temperature but less than the second melting temperature, is applied, the plurality of first solder balls create a plurality of solder joints between the top surface and the bottom surface and the plurality of second solder balls define a minimum distance between the carrier substrate and the printed circuit board.

28. (new) An integrated circuit prepared by a process comprising:
applying a plurality of first solder balls having a first dimension and a first melting temperature to a bottom surface of a carrier substrate using a solder dispensing machine;
applying a plurality of second solder balls having a second dimension and a second melting temperature to the bottom surface of the carrier substrate using a solder dispensing machine;
engaging the bottom surface of the carrier substrate with a top surface of a printed circuit board; and
applying a soldering heat, the soldering heat having a temperature greater than or equal to the first melting temperature and less than the second melting temperature, to the carrier substrate and printed circuit board so that the plurality of first solder balls create a plurality of solder joints between the bottom surface and the top surface and the plurality of second solder balls define a minimum distance between the carrier substrate and the printed circuit board.

29. (new) The integrated circuit of claim 28 prepared by the process further comprising:
prior to engaging the bottom surface of the carrier substrate with the top surface of the printed circuit board, attaching an integrated circuit on the bottom surface of the carrier substrate, such that the minimum distance is disposed between the integrated circuit and the printed circuit board.

30. (new) The integrated circuit of claim 28 prepared by the process further comprising:

prior to engaging the bottom surface of the carrier substrate with the top surface of the printed circuit board, attaching at least one heat sink to a top surface of the carrier substrate.

31. (Original) The integrated circuit of claim 28 wherein each of the plurality of second solder balls further include an outer layer composed of a material having the first melting temperature such that when the printed circuit board and the carrier substrate are heated, the plurality of second solder balls create a control solder joint, which includes a melted outer layer and the second solder ball having the second diameter.